FIG. 1

```
1   ATGGCCGCTCGCGGGCTGCTGAACGCGCGGCCCGAGACGGTCGGGGAGGACAGCGT
1▶  MetAlaAlaArgGlyAlaGlyAlaGluAlaArgAlaAlaGlyAlaAlaGlyAlaAspGlyAlaArgGlyArgArgGlyGlnArg

64  CGTCATCTACGACCGGGACGTGTTCTCGCTCTACGGCCTCGCAGCGCTCGGCGCCGGC
22▶ ArgHisLeuArgProGlyArgValLeuAlaLeuAlaAlaLeuArgGlyProAlaAlaAlaProGlyAlaGly

127 GGGGCGGCGCGGCTAGCCGCTGCTATGGGCGCCCTGCCCTGCTCTGCGGCG
43▶ GlyAlaArgAlaAlaLeuAlaAlaAlaMetGlyAlaLeuProAlaLeuLeuLeuAlaAla

190 CCCGGCGGGGACCGGCACAACGCCCCGGCCCCCGAAGAGGCCGGAGCCCG
64▶ ProAlaAlaGlyArgProAlaThrThrProAlaProProGluAlaAlaSerPro

253 GCGCCCCCGCGAGCCCCAGCCCCGACGACGCCCAGCCCCGACAAC
85▶ AlaProProAlaSerProSerProProGlyProAspAspAlaSerProAspAsn

316 AGCACAGACGTGCGCGCCGCTCGGCGCGAAAACTCGGCTTCTTC
106▶ SerThrAspValArgAlaAlaLeuArgAlaGlnAlaAlaGlyGluAsnSerArgPhePhe

379 GTGTGCCCCCGCCCTCGGGGCCACGGTGGTCCGGTCGCCGTGCCCTGAG
127▶ ValCysProProProSerGlyAlaThrValValArgLeuAlaProAlaArgProCysProGlu

442 TACGGGCTCGGCGGCGAACTACACGAGGGCATCGGGTCATTACAAGGAGAACATCGCGCCG
148▶ TyrGlyLeuGlyArgAspTyrThrGluGlyIleGlyValIleGluTyrLysGluAsnIleAlaPro

505 TACACGTTCAAGCCTACATTACAAAAACGTGATCGTGACCACGACCTGGGGCAGCACG
169▶ TyrThrPheLysAlaTyrIleTyrIleTyrLysAsnValIleValThrThrThrTrpAlaGlySerThr
```

FIG. 2A

TACGGCGGCCATTACAAACCAGTACACGGACCGGCGGTGCCCGTGGGCCATGGGCGAGATCACGGAC
568

190▸TyrAlaAlaIleThrAsnGlnTyrThrAspArgValProValGlyMetGlyGluIleThrAsp

CTGGTGGACAAGAAGTGGCGCTGCCTTTCGAAAGCCGAGTACCTGGCAGGGGCGCAAGGTG
631

211▸LeuValAspLysLysTrpArgCysLeuSerLysAlaGluTyrLeuAlaGlyAlaArgGlysVal

GTGGCCTTTGACCGCGACGACGACCCCTGGGAGGCGCCTGAAGCCCTGAGCGCCTGAGCGCCG
694

232▸ValAlaPheAspArgAspAspAspProTrpGluAlaProLeuLysProAlaAlaArgLeuSerAla

CCCGGGGTGGCGGGCTCGCACACGACGACGATGTGTACACGGGCGGCTCGGGGGCTC
757

253▸ProGlyValAlaArgGlyTrpHisThrThrAspAspValTyrThrAlaLeuGlySerAlaGlyLeu

TACCGCACGGGCACCTCTGTGAACTGCATGGTGGAAGAAGTGGAGGCGGCTCGGTGTACCCG
820

274▸TyrArgThrGlyThrSerValAsnCysIleValGluValGluGluValGluAlaAlaArgSerValTyrPro

TACGACTCGTTCGCGCTCTCGACCGGGACATTATCTACATGTGCCCTTTTACGGGCTGCGC
883

295▸TyrAspSerPheAlaLeuSerThrGlyAspIleIleTyrMetSerProPheTyrGlyLeuArg

GAGGGCGGCGCACATGGCCACCGGAGCACCAGCTACTCGCCGCGGCCTTCCAGCAGATCGAGGGCTA
946

316▸GluGlyAlaHisArgGluHisThrArgLeuLeuAlaGlyAlaLeuProAlaAspArgGlyLeu

CTACAAGGCGACATGGCCACGGGCCGGCCCTCAAGGAGCCGGTCTCGGGAACTTTTTCCG
1009

337▸LeuGlnAlaArgHisGlyHisGlyProAlaProGlnGlyAlaGlyLeuAlaGlyLeuLeuPheAla

TACACAGCACGTGACGGTAGCCTGGGACTGGGTGCCCAAGCCAAAAACGTGTGCTCGCTGGC
1072

358▸TyrThrAlaArgAspAspGlySerLeuGlyLeuLeuGlyAlaGlnLeuAlaGlnLysArgValAlaLeuAlaGlyGly

FIG. 2B

1135 CAAGTGGCGGCGAGGCGGACGAAATGCTGCGAGAGAGCGGGAACTTCCGCTTCACGGC
379▶ GlnValAlaArgGlyGlyArgAspAlaAlaArgArgGluProArgGluLeuProLeuHisGly

1198 CCGCTCGCTCTCGGCGACCTTTGTGAGCGACAGCCACACTTCGCCGTTGCCAGAATGTGCCGCT
400▶ ProLeuAlaLeuGlyAspLeuCysGluArgGlnProHisLeuArgValAlaGluCysAlaAla

1261 GAGCGACTGCCTGATCGAAGAGGCCCGTCGAGCGGTCTACCGGAGCGCTACAA
421▶ GluArgLeuArgAspArgArgGlyArgGlyArgGlyArgAlaArgLeuProArgAlaLeuGln

1324 CGGCACGCACGTCGTCTCGGGCAGCTTGGAGACGTACCTGGCGGCGGCTTTGTCGTGGC
442▶ ArgHisAlaAlaArgValGlyGlnLeuGluGlyAlaGlyAspValProGlyAlaArgLeuCysArgGly

1387 CTTCCGGGCGATGCTCAGCAACGAGCTGTACCTGCCAAGCTGGCTGGCGGCTCGAAC
463▶ LeuProAlaMetLeuSerAsnGluLeuAlaLysLeuTyrLeuGluGlnLeuAlaArgSerAsn

1450 GGCACGCTCGAGGGGCTGTTCGCCGGCCCCAAGCCGCCGCGGCGGCGCCGC
484▶ GlyThrLeuGluGlyLeuPheAlaAlaAlaAlaProLysProProArgProArgArgArg

1513 GCCGGCGGCCGTTGCCCGGGCCGGGCCAACGGGCCCGGGCCGCGACGGCGACGCC
505▶ AlaAlaProSerAlaProGlyGlyGlyProGlyAlaAlaAsnGlyProGlyAlaGlyAspAla

1576 GGGGGGCGGGTGACTACCGTGAGCTGGCCCGAGTTTGCGCGGCTGCAGTTCACGTACGACCAC
526▶ GlyGlyArgValThrThrValSerSerAlaGluPheAlaAlaLeuGlnPheThrTyrAspHis

1639 ATCCAGGACCACGTGAACACCATGTTCAGCCGGCTGAACACGTCCTGGTGCCTGCTGCTGCAGAAC
547▶ IleGlnAspHisValAsnThrMetPheSerArgLeuAlaThrSerTrpCysLeuLeuGlnAsn

FIG. 2C

```
1702  AAGGAGCGGCGCCCTGTGGGCGGGCTAAGCTCAACCCCAGCGGCGGGCCAGCGCCTGCG
 568► LysGluArgArgLeuTrpAlaGlyLeuAsnProSerAlaAlaAlaSerAlaAla

1765  CTGGACCGCGGCCGGGCGGGCCATGTGGGGGACGGCCGTGACGTACTGCCACGAG
 589► LeuAspArgArgAlaAlaAlaAlaMetTrpGlyAspAlaMetAlaValThrTyrCysHisGlu

1828  CTGGGCGAGGGGCGGTGTTCATCGAGAACTCGATGGGGCGCCGGTTGCTACAGC
 610► LeuGlyGluGlyArgValPheIleGluAsnSerMetArgAlaProGlyGlyValCysTyrSer

1891  CGCCCGCCGGTCTCCTTTGCCTTCGGCAACGAGAGCGGTGGAGGGCCAGCTCGGCGAG
 631► ArgProProValSerPheAlaPheGlyAspGluSerGluProValGluGlyGlnLeuGlyGlyGlu

1954  GACAACGAGCTGCGCGGGCCTCGTGAGCCTGGAGCTCGTGCTGGTCCTGGTCGTCCGCTAC
 652► AspAsnGluLeuProGlyArgGluLeuValGluProCysThrAlaAsnHisLysArgTyr

2017  TTCCGGTTTGGCGGCGACTACGTGTACTACGAGAACTACGGGTACGTCGGGGTCCCGCTC
 673► PheArgPheGlyAlaAspTyrValTyrTyrGluAsnTyrAlaTyrValArgValProLeu

2080  GCGGAGCTGGAGGTGATCAGCACCTTTGTGGACCTAAACCTCACGGTTCTGAGGACCGGCGAG
 694► AlaGluLeuGluValIleSerThrPheValAspLeuAsnLeuThrValLeuGluAspArgGlu

2143  TTCTTGCCGTAGAAGTGTACACGGGCGGCCCGAGCTCGCCGACACGGGTCTCGACTACAGC
 715► PheLeuProLeuGluValTyrThrArgAlaGluLeuAlaAspThrGlyLeuLeuAspTyrSer

2206  GAGATACAGCCCGCAACCAGCTCGACGAGCTCCGGTCTTCTACGACATTGACCCGTGGTCAAG
 736► GluIleGlnArgArgAsnGlnLeuHisGluLeuArgPheTyrAspIleAspProTrpValLys
```

FIG. 2D

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2269  ACGGACGGCAATATGGCCATCATGGCGAGGGCTCGCCAACTTCTTTCAGGCCTGGGCCGTC
757▶    ThrAspGlyAsnMetAlaIleMetAlaArgGlyLeuAlaAsnPhePheGlnGlyLeuGlyAlaVal

2332  GGGCAGGCGGTGGGCACGGTGGTGCTGGGCCGGTGCTCTCGACCGTGTCGGC
778▶    GlyGlnAlaValGlyThrValValLeuGlyValAlaAlaGlyAlaAlaAlaLeuSerThrValSerGly

2395  ATCGCCTCGTTTATTGCGAACCCGTTCGGGGCTGGCCACGGGGCTGCTGGTGCTCGCCGGG
799▶    IleAlaSerPheIleAlaAsnProPheGlyAlaLeuAlaThrGlyLeuLeuValLeuAlaGly

2458  CTGGTGGCCGCTTCCTGGTACCGTACATTCCCGCCTCCGCAGCAACCCATGAAGGCG
820▶    LeuValAlaAlaPheLeuAlaTyrArgTyrIleSerArgLeuArgSerAsnProMetLysAla

2521  CTGTACCCGATCACCACGCGCGCTCAAGGACGACCCCGGGGCCAACGCCCGGGGCGAG
841▶    LeuTyrProIleThrThrArgAlaLeuLysAspAspProGlyAlaAsnAlaArgGlyAlaThrAlaAlaProGlyGlyGlu

2584  GAAGAGAGGAGTTTGACGGGCCAAACTGGAGCAGGCCAACTGATCAAGTATATGTCG
862▶    GluGluGluPheAspAlaLeuThrGlyGlnAlaAlaArgGlnAlaArgGluMetIleLysTyrMetSer

2647  CTCGTGTCAGCGGTCGAGCGGTCGAAGAGCACAAGGCGAAAAAGAGCACAAGGCGGCTG
883▶    LeuValSerAlaValGluArgGlnGluHisLysAlaLysLysSerAsnLysSerGlyGlyProLeu

2710  CTGGCGACCCGCTACGCTTCGGCGGCTTCGGCGGAGCGCCCGGAGTACCAGCAGCAGCTT
904▶    LeuAlaThrArgLeuThrGlnLeuAlaLeuArgArgArgAlaProProGluTyrGlnGlnLeu

2773  CCGATGGCCGACGTCGGGGGGCATGA
925▶    ProMetAlaAspValGlyGlyAla•••
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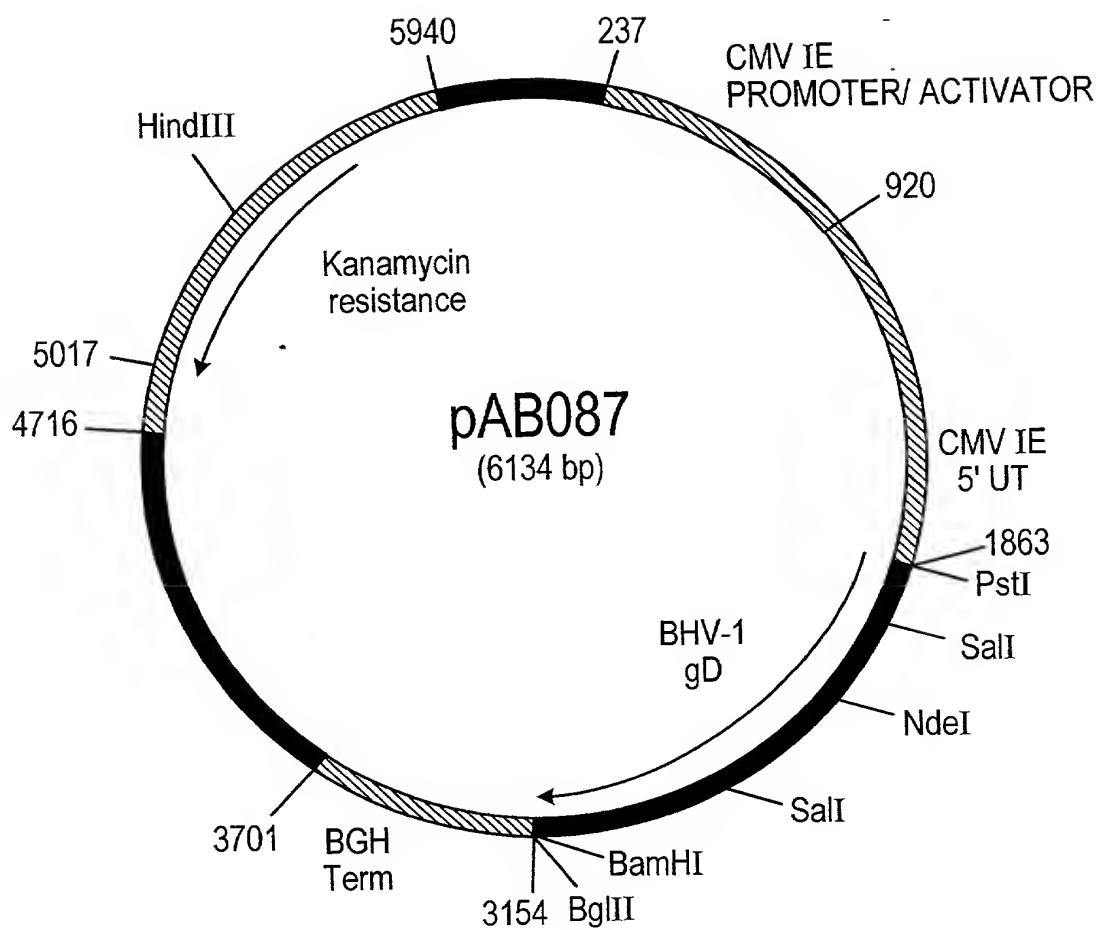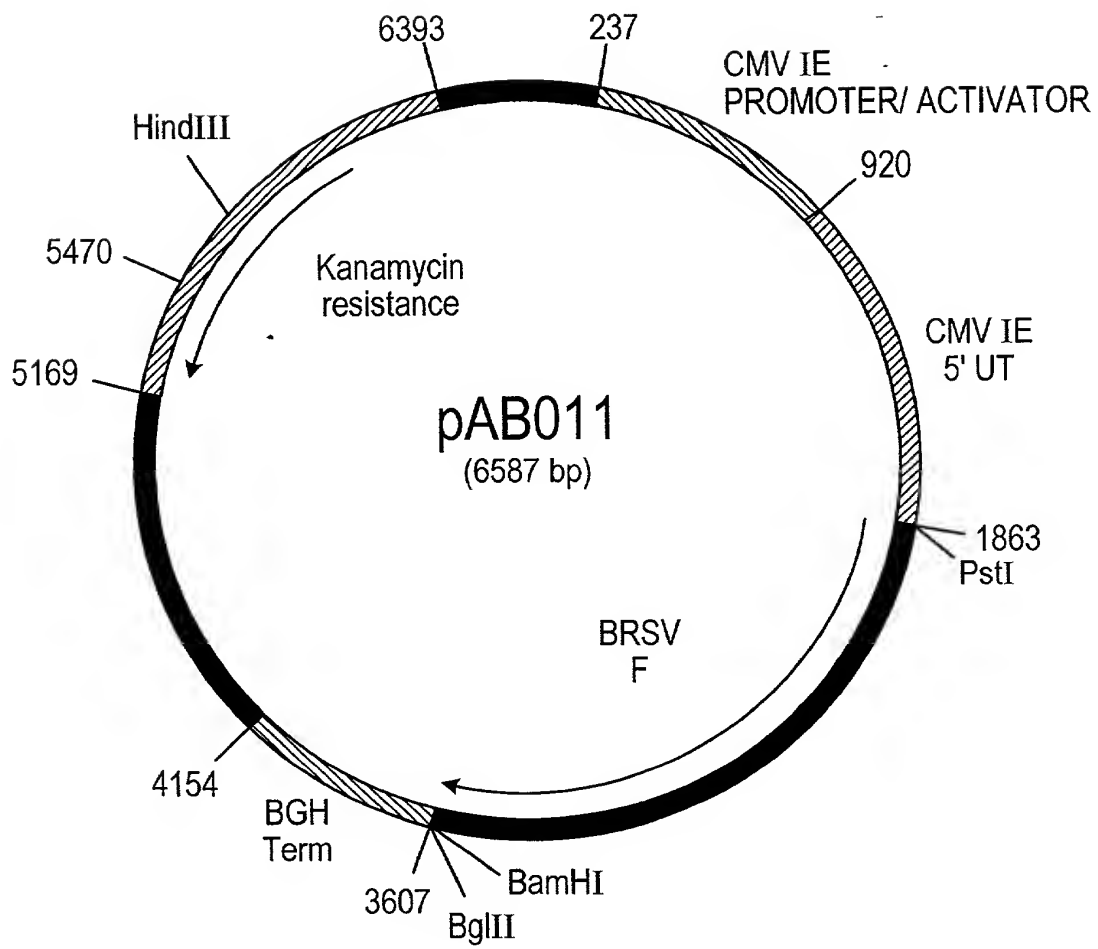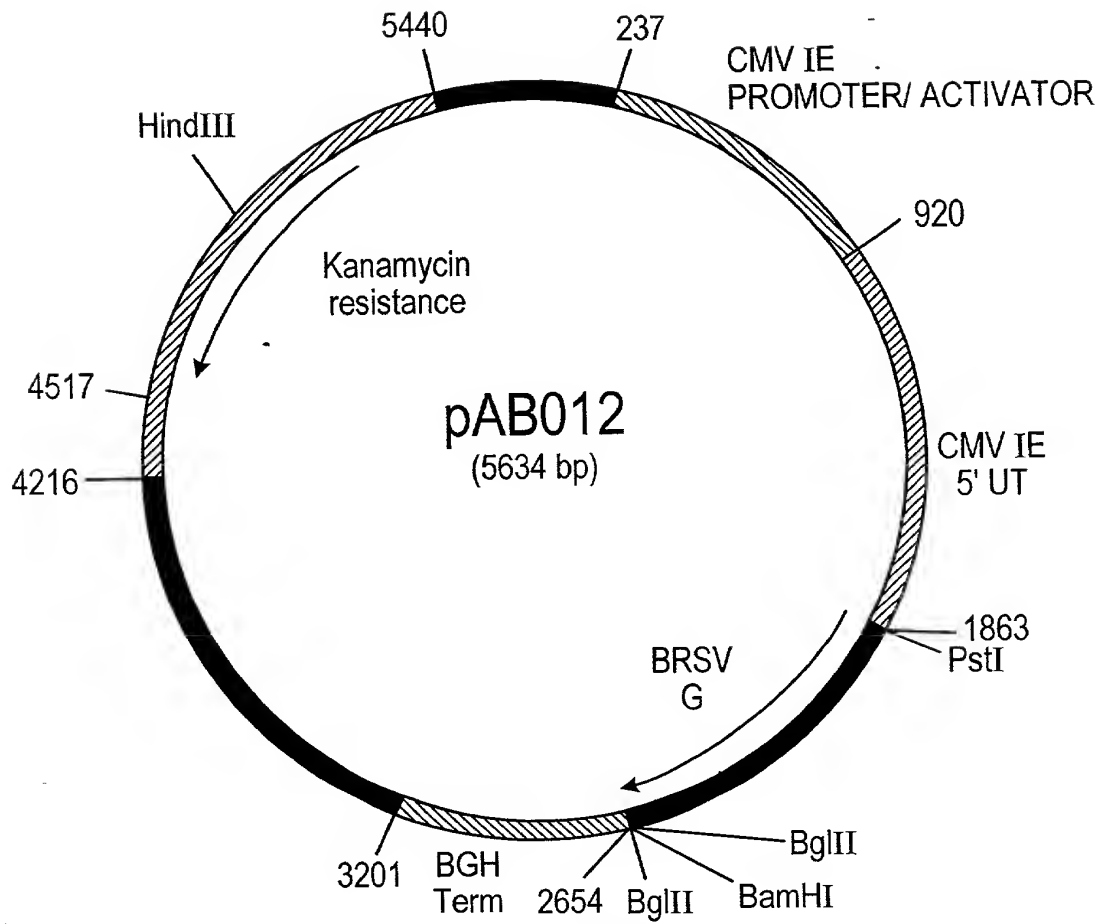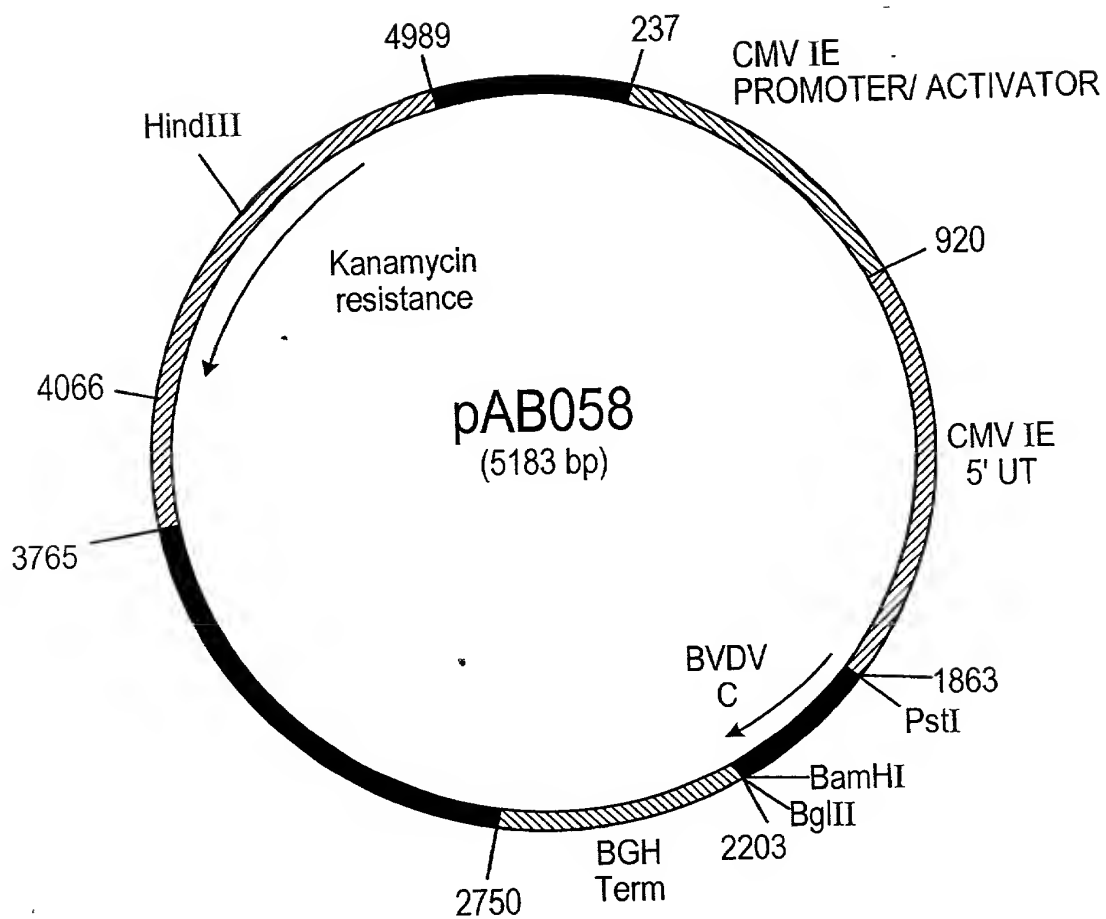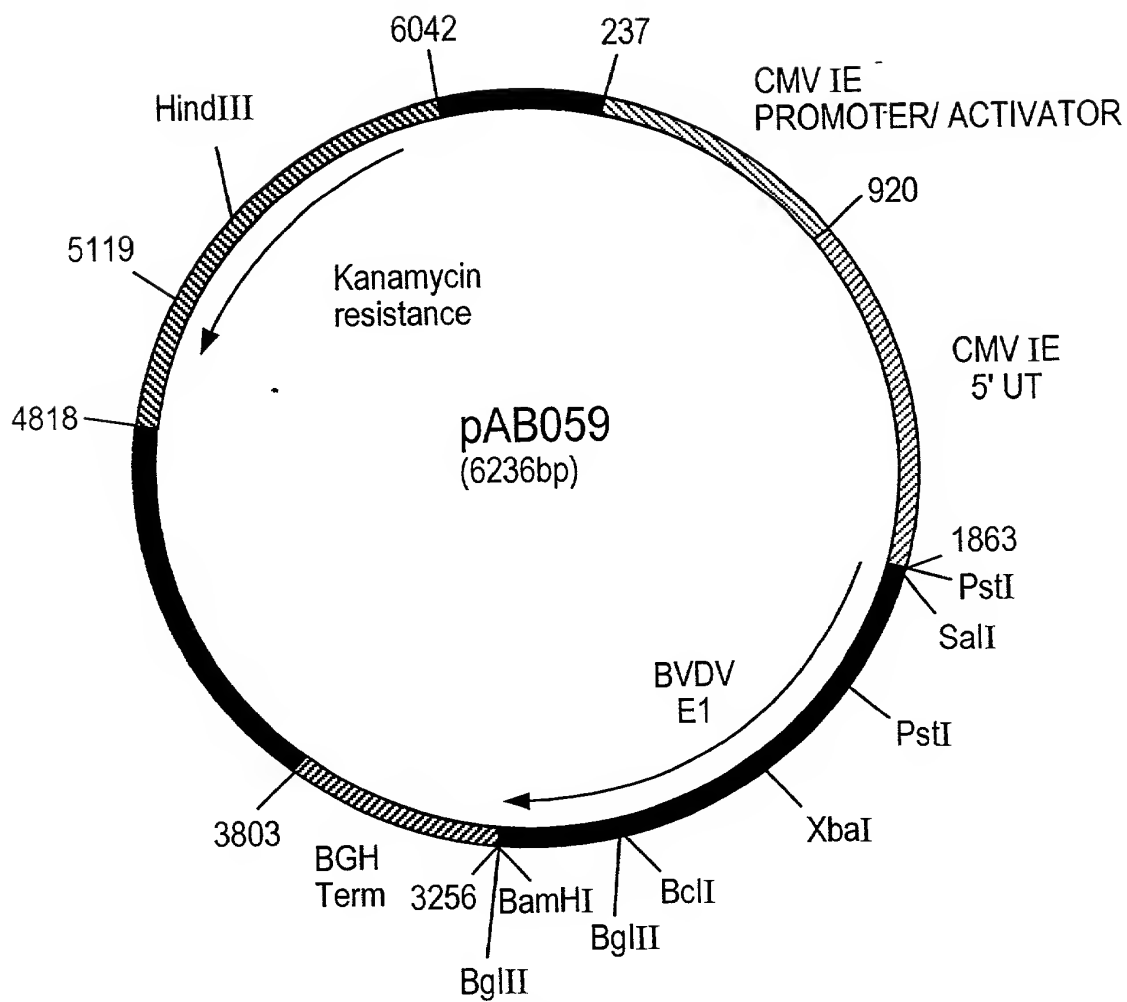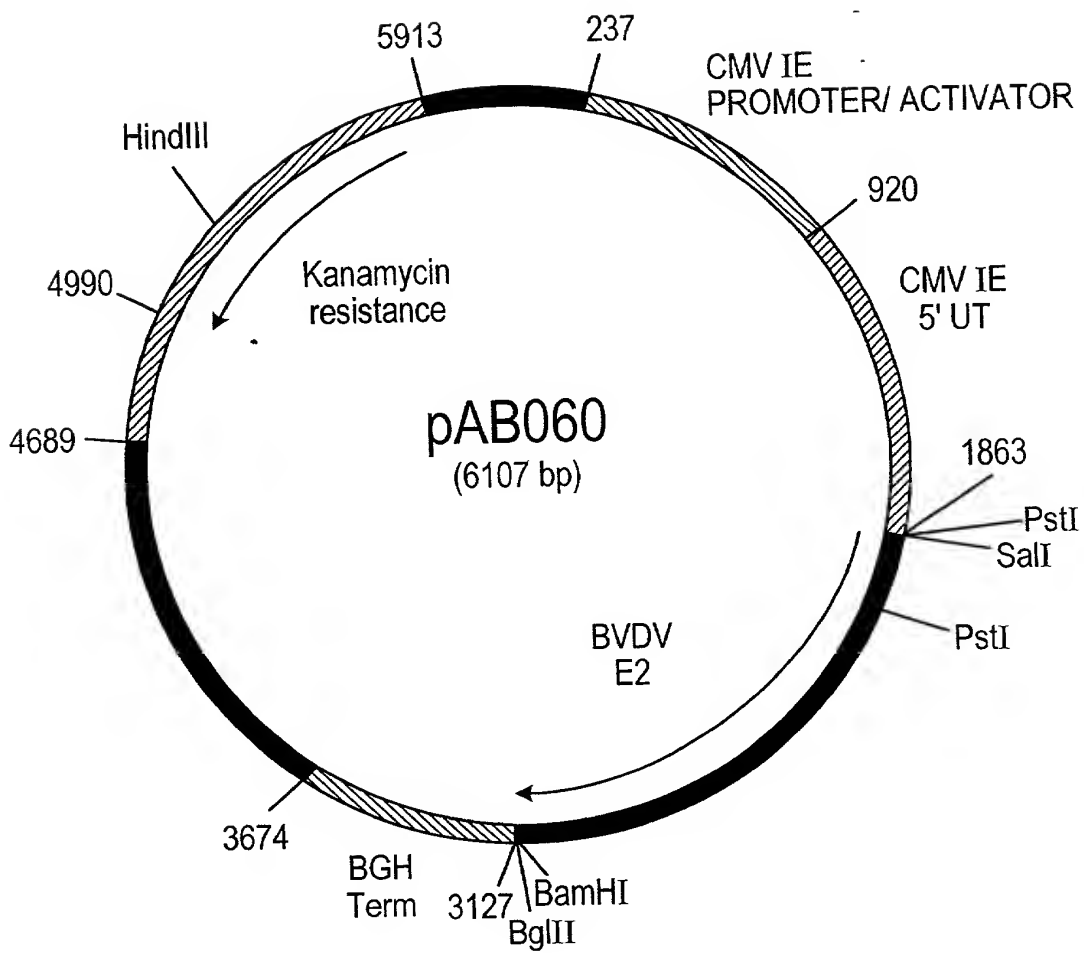
FIG. 2E
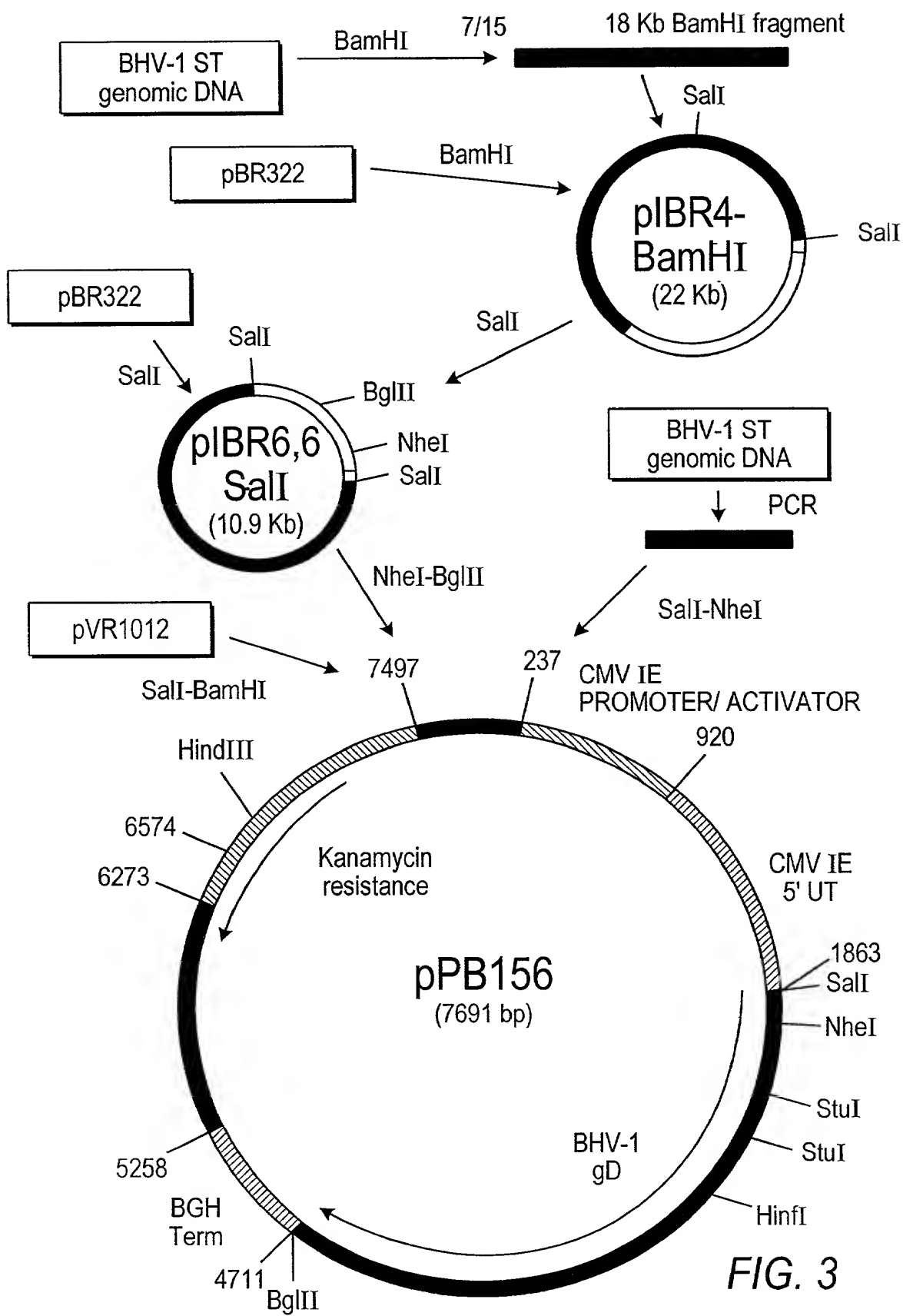
FIG. 3

FIG. 4

FIG. 5

FIG. 6

FIG. 7

FIG. 8

FIG. 9

FIG. 10

FIG. 11